In the Claims:

Please amend the claims as indicated below:

1. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has reversible free spontaneous magnetization;

a fixed layer which has first fixed spontaneous magnetization fixed in a first direction; and

a spacer layer formed of non-magnetic material and interposed between said free layer and said fixed layer,

wherein ~~said fixed layer does not substantially exert~~ magnetic fields by said fixed layer due to orange peel effect and magneto-static coupling effect are substantially cancelled in said free layer.

2. (Currently amended) The magnetic random access memory according to claim 1, wherein said fixed layer comprises:

a first pinned layer which has ~~another~~ second fixed spontaneous magnetization ~~in which a direction of a magnetization is fixed~~ into a second direction opposite to ~~a~~ said first direction ~~as a direction~~ of said first fixed spontaneous magnetization; and

a second pinned layer which is provided between said first pinned layer and said free layer and has said first fixed spontaneous magnetization, and

said first pinned layer and said second pinned layer are formed such that magnetic fields by said fixed layer ~~does not substantially exert on said free layer~~ due to the orange peel effect and the magneto-static coupling effect are substantially canceled in said free layer.

3. (Original) The magnetic random access memory according to claim 2, wherein a summation of a first magnetic field applied to said free layer by said first pinned layer due to the orange peel effect and a second magnetic field applied to said free layer by said second pinned layer due to the orange peel effect is substantially zero.

4. (Currently amended) The magnetic random access memory according to claim 2, wherein said fixed layer further comprises:

another spacer layer of non-magnetic material interposed between said first pinned layer and said second pinned layer, and

said another spacer layer has a film thickness such that said first fixed spontaneous magnetization and said ~~another~~ second fixed spontaneous magnetization are anti-ferromagnetically coupled.

5. (Currently amended) The magnetic random access memory according to claim 2, wherein said fixed layer is provided to extend in said first direction, and

~~a distance between~~ each of ends of said fixed layer and said free layer is separated ~~large to an extent~~ such that a magnetic field generated by magnetic poles produced in said ends does not interlink with a magnetic field due to free spontaneous magnetization of said free layer.

6. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has a reversible free spontaneous magnetization;

a synthetic ferrimagnetic fixed layer; and

a spacer layer formed of non-magnetic material and interposed between said free layer and said synthetic ferrimagnetic fixed layer,

wherein said synthetic ferrimagnetic fixed layer comprises:

a first pinned layer which has a first fixed spontaneous magnetization fixed in a first direction; and

a second pinned layer which has a second fixed spontaneous magnetization fixed in a second direction which is opposite to said first direction,

said first pinned layer comprises:

a first portion provided to extend said first direction; and

a second portion formed on said first portion such that said second portion is aligned in position with said second pinned layer in a direction perpendicular to a surface of a substrate on which said magnetic random access memory is formed,

said first pinned layer and said second pinned layer are formed such that said synthetic ferrimagnetic fixed layer does not substantially influence on said free layer due to orange peel effect,

when said first fixed spontaneous magnetization is M_1 said second fixed spontaneous magnetization is M_2 and said second portion has a thickness of t_2, said second portion is formed to have a thickness of $(M_2/M_1)*t_2$, and

said synthetic ferrimagnetic fixed layer is formed such that said synthetic ferrimagnetic fixed layer does not substantially give influence of the magneto-static coupling effect to said free layer.

7. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has reversible free spontaneous magnetization;

a synthetic ferrimagnetic fixed layer; and

a spacer layer of non-magnetic material interposed between said free layer and said synthetic ferrimagnetic fixed layer,

wherein said synthetic ferrimagnetic fixed layer comprises:

a first pinned layer which has first fixed spontaneous magnetization fixed in a first direction; and

a second pinned layer provided between said free layer and said first pinned layer to have second fixed spontaneous magnetization fixed in a second direction which is opposite to said first direction, and

a summation of a first magnetic field applied to said free layer by said first pinned layer due to orange peel effect and orange peel effect and a second magnetic field applied to said free layer by said second pinned layer is substantially zero.

8. (Original) The magnetic random access memory according to 7, wherein said synthetic ferrimagnetic fixed layer comprises:

another spacer layer of non-magnetic material provided between said first pinned layer and said second pinned layer, and

said another spacer layer has a film thickness such that said first fixed spontaneous magnetization and said second fixed spontaneous magnetization are anti-ferromagnetically coupled.

9. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has reversible free spontaneous magnetization;

a fixed layer which has first fixed spontaneous magnetization fixed in a first direction; and

a spacer layer formed of non-magnetic material interposed between said free layer and said fixed layer,

wherein said fixed layer is provided to extend in said first direction, and

~~a distance between~~ each of ends of said fixed layer and said free layer is separated ~~long to an extent~~ such that a magnetic field generated by magnetic poles in the ends does not interlink with a magnetic filed of said free layer due to said free spontaneous magnetization.

10. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has reversible free spontaneous magnetization;

a synthetic ferrimagnetic fixed layer; and

a spacer layer of non-magnetic material interposed between said free layer and said synthetic ferrimagnetic fixed layer,

wherein said synthetic ferrimagnetic fixed layer comprises:

a first pinned layer which has first fixed spontaneous magnetization in said first direction; and

a second pinned layer provided between said free layer and said first pinned layer to have second fixed spontaneous magnetization in said second direction which is opposite to said first direction,

said first pinned layer comprises:

a first portion provided to extend in said first direction and said second direction; and

a second portion formed on said first portion such that said second portion is aligned in position with said second pinned layer in a direction perpendicular to a surface of a substrate on which said magnetic random access memory is formed, and

when said first fixed spontaneous magnetization is M_1, said second fixed spontaneous magnetization is M_2 and a thickness of said second pinned layer is t_2, said second portion has a thickness substantially equal to $(M_2/M_1)*t_2$.

11. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has reversible free spontaneous magnetization;

a synthetic ferrimagnetic fixed layer; and

a spacer layer of non-magnetic material interposed between said free layer and said synthetic ferrimagnetic fixed layer,

wherein said synthetic ferrimagnetic fixed layer comprises:

a first pinned layer which has first fixed spontaneous magnetization fixed in a first direction; and

a second pinned layer provided between said spacer layer and said first pinned layer to have second fixed spontaneous magnetization in a second direction which is opposite to said first direction, and

said first fixed spontaneous magnetization, said second fixed spontaneous magnetization, a film thickness of said first pinned layer and a film thickness of said second pinned layer are determined such that a magnetic field applied to said free layer by said synthetic ferrimagnetic fixed layer due to orange peel effect and a magnetic field applied to said free layer by said synthetic ferrimagnetic fixed layer due to magneto-static coupling effect are 10 (Oe) or below.

12. (Currently amended) A magnetic random access memory comprising a plurality of memory cells, each of which comprises:

a free layer which has reversible free spontaneous magnetization;

a synthetic ferrimagnetic fixed layer; and

a spacer layer of non-magnetic material interposed between said free layer and said synthetic ferrimagnetic fixed layer,

wherein said synthetic ferrimagnetic fixed layer comprises:

a first pinned layer which has first fixed spontaneous magnetization in a first direction; and

a second pinned layer provided between said spacer layer and said first pinned layer to have a second fixed spontaneous magnetization fixed in a second direction which is opposite to said first direction, and

said first fixed spontaneous magnetization M_1, said second fixed spontaneous magnetization M_2, a film thickness t_1 of said first pinned layer and a film thickness t_2 of said second pinned layer are determined to satisfy the following equation:

$$\frac{M_1}{M_2} \bullet \frac{t_1}{t_2} > 1$$

13. (Original) The magnetic random access memory according to claim 12, wherein said M_1 and said M_2 are substantively equal to each other.

14. (Original) The magnetic random access memory according to claim 12, wherein said first pinned layer and said second pinned layer are formed of same material.

15. (Original) The magnetic random access memory according to claim 12, wherein the following equation:

$M_1 > M_2$

is satisfied.

16. (Currently amended) The ~~A~~ magnetic random access memory according to claim 1 ~~any of claims 1 to 15~~, wherein said spacer layer is formed of non-magnetic and insulating material, and a thickness of said spacer layer is thin to an extent that a tunnel current flows in a thickness direction.